

Amendments To The Claims

1. (*currently amended*) A method of analyzing a biological sample comprising:

~~preserving precipitating~~ RNA in the biological sample by incubating the biological sample with an RNA preservative in an aqueous solution ~~so as to precipitate RNA~~ yield a biological sample containing preserved RNA;

histochemically staining the ~~RNA-preserved~~ biological sample containing preserved RNA;

histochemically analyzing the stained biological sample containing preserved RNA to identify specific cell populations; and

analyzing mRNA expression patterns of the identified cells by a method comprising: in-situ hybridization; or isolating identified cells and subjecting the isolated cells to bioarray gene profiling.

2. (*original*) A method according to claim 1, wherein the RNA preservative is selected from the group consisting of triphenylmethane dyes, cresyl violet, polyamines, and cobalt ions.

3. (*original*) A method according to claim 1, wherein the RNA preservative is a triphenylmethane dye selected from the group consisting of methyl green, crystal violet, and pararosaniline.

4. (*original*) A method according to claim 1, wherein the histochemically analyzing comprises subjecting the biological sample to a histochemical assay selected from the group consisting of: in situ hybridization for detecting mRNA;

fluorescence in-situ hybridization for detecting DNA;
immunocytochemistry assay for detecting proteins; enzyme
histochemistry assay for measuring catalytic activities of
enzymes; ligand-binding autoradiography for studying
receptor-ligand interactions; and glycohistochemistry assay for
detecting carbohydrate-modified substances.

5-19. (*canceled*)